THE PHYTOLOGIST.

No. XII. | MAY, MDCCCXLII. | PRICE 6D.

ART. LX. — *Localities of British Algæ in addition to those given in Harvey's Manual.* By JOHN RALFS, Esq.

Penzance, January 10, 1842.

SIR,

Several of my friends having expressed their regret that Mr. Harvey did not give a greater number of new habitats in the 'Manual of British Algæ,' though considering the short stay he made in England I was surprized to find so many as there are, I avail myself of the facility afforded by 'The Phytologist' to make the following addition to the number given in that work. I either possess, or have seen, specimens from all the habitats given.

My friend Mr. Dickie finds Gelidium? rostratum plentiful about Aberdeen, on the stems of Laminaria digitata.*

Yours very truly,
JOHN RALFS.

To the Editor of 'The Phytologist.'

I confine myself in the following List to the species mentioned in the Manual, or in the 'Supplement to English Botany.'

Cystoseira granulata. Small cove near Aberffraw, Anglesea.

Lichina confinis. Common on most rocky coasts, as Devon, Cornwall, Wales &c., generally within reach only of the spray.

Laminaria debilis. Salcombe; April.

——— *fascia*, (Eng. Bot. t. 2845). Salcombe; Mount's Bay, Cornwall, plentiful; April.

Dictyota atomaria. Tenby; Rev. T. Salwey. Bracelet Bay, Glamorganshire.

Dictyosiphon fœniculaceus, (Eng. Bot. t. 2746). Abundant in the Menai Strait.

Striaria attenuata. By flood-gates of mill-pool opposite Devonport.

Asperococcus compressus, (Eng. Bot. t. 2846). Mount's Bay.

——— *pusillus.* Caernarvon.

Sphacelaria filicina. Mount's Bay, sparingly; between Holyhead and Holyhead Mountain.

——— *plumosa.* Beaumaris; thrown up on the shore at Barmouth.

——— *radicans.* Ilfracombe; Mount's Bay; Land's End.

——— *? velutina.* Torbay; Salcombe; Mount's Bay.

Ectocarpus fasciculatus. Mount's Bay, on stems of Laminaria digitata.

——— *Hincksiæ.* Torquay; Miss Griffiths. Breakwater, Plymouth; Rev. W. S. Hore.

——— *crinitus.* Salcombe.

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* See note by Mrs. Griffiths, page 203.

Ectocarpus pusillus. St. Michael's Mount, Cornwall.

——— *sphærophorus.* Mount's Bay; Sennen Cove, Land's End; Milford Haven; near the Menai Bridge.

——— *Mertensii.* Mount's Bay, near Penzance.

Helminthocladia virescens. Common. Plymouth; Mount's Bay; Aberystwith; Caernarvon; Bangor, &c.

Mesogloia multifida, var. *subsimplex.* Land's End.

——— *Hudsoni.* Aberffraw, Anglesea.

——— *coccinea.* Salcombe.

Gloiosiphonia capillaris. Mount Edgecombe; Rev. W. S. Hore.

Naccaria Wigghii. Salcombe.

Nitophyllum punctatum, β. ocellatum. Mount Edgecombe; Rev. W. S. Hore.

——— *ulvoideum.* Scilly Islands; Miss M. White. Mount Edgecombe; Rev. W. S. Hore. Salcombe.

——— *Gmelini.* Mount Edgecombe; Rev. W. S. Hore. Bracelet Bay, Glamorganshire, very abundant.

Rhodomenia reniformis. Witsand Bay, Land's End.

Rhodomela scorpioides. Plymouth, abundant.

Bonnemaisonia asparagoides. Scilly Islands; Miss M. White. Mount's Bay; Mr. Carnow.

Chylocladia parvula. Falmouth; Miss Warren. Mount's Bay.

Gigartina Griffithsiæ. Mount's Bay.

Chondrus norvegicus. Mount's Bay.

Grateloupia filicina, (Eng. Bot. t. 2780). Lynmouth, Devonshire; Rev. W. S. Hore. Mount's Bay, plentiful.

Ptilota plumosa, a. major. Between Holyhead and Holyhead Mountain. Although this form is common in Scotland and the North of England, it becomes very scarce as we advance southward.

Polysiphonia parasitica. Mount's Bay; Land's End; Holyhead.

——— *cristata.* Mount's Bay; Mr. Carnow. Land's End.

——— *thuyoides.* Ilfracombe, plentiful; St. Michael's Mount. In Mr. Dillwyn's herbarium are specimens of this plant gathered thirty years ago.

——— *spinulosa.* Falmouth Bay; Miss Warren.

——— *violacea.* Plymouth; Mrs. Griffiths. Caernarvon.

——— *pulvinata.* Salcombe; Mount's Bay; Land's End.

——— *byssoides.* Shores of Wales, common.

Dasya ocellata. Mill-pool opposite Devonport; Rev. W. S. Hore. Mount's Bay.

Spyridia filamentosa. Cove near Aberffraw, plentiful; Holyhead.

Griffithsia equisetifolia. Coast of North Wales, common.

——— *corallina.* Caernarvon.

Callithamnion Hookeri. Salcombe; Mount's Bay; Milford Haven.

——— *roseum.* Falmouth; Miss Warren. Salcombe; Teignmouth; Milford; Menai Strait; Barmouth.

——— *byssoides.* Falmouth; Miss Warren. Mount's Bay; Milford Haven; Caernarvon.

——— *polyspermum.* Teignmouth; Salcombe; Plymouth; Mount's Bay; Milford; Bangor; Caernarvon, &c.

——— *Borreri, β. seminudum.* Land's End.

Callithamnion gracillimum. Milford Haven.
——— *thuyoides.* Ilfracombe; Bracelet Bay, near Swansea.
——— *spongiosum.* Cawsand Bay, near Plymouth; Land's End; Holyhead.
——— *pedicellatum.* Salcombe; Mount's Bay; Milford Haven.
——— *barbatum.* Plymouth.
——— *Pluma.* Torbay.
Chætophora pellita. Land's End; Mount's Bay.
Conferva pellucida and *diffusa.* Aberffraw and Holyhead abundant.
——— *refracta* and *glaucescens.* Mount's Bay.
Mougeotia cærulescens. In several places about Penzance.
Codium adhærens, (perennial). Sennen cove, Land's End.
Bryopsis hypnoides, (Eng. Bot. t. 2781). Ilfracombe.
Vaucheria velutina. Near Holyhead.
——— *clavata.* Pilton, Devonshire; Mrs. Griffiths. Specimens much taller and more diffuse than the figure in the 'Gleanings,' but Mr. Berkeley considers that it belongs to this species.
Rivularia plicata. Salcombe; Ilfracombe; Barmouth.
——— *nitida.* Cawsand Bay, near Plymouth; Mount's Bay.
Scytonema turfacea, (Berkeley in Eng. Bot.' t. 2826). Sussex, Mr. Borrer.
Calothrix interrupta. Machynlleth, North Wales.
Lyngbya majuscula. Ilfracombe; Plymouth; Mount's Bay; Anglesea, near the Menai Bridge.
——— *ferruginea.* Sussex; Mr. Borrer. Near Holyhead.
——— *Carmichaelii.* Mount's Bay.
——— *speciosa.* Mount's Bay.
Oscillatoria Friesii. Many places in North Wales.
——— *cyanea.* Towednack Church, near St. Ives; the Rev. H. Penneck.
Ulva calophylla. Oswestry, Shropshire; Rev. T. Salwey. Aberdeen; Mr. Dickie. Llanberris; Capel Cerrig and Dolgelly, North Wales.
Bangia Laminariæ. Scilly Islands; Miss M. White. Mount's Bay.
Palmella Ralfsii. Cwm Bychan, Snowdon, Glyder &c., North Wales.
Hydrurus Ducluzelii. River Ogwen near Bangor. I am not certain about the species; I had no microscope with me, and neglected to preserve specimens: it was not half the size of the Devonshire plant.
Nostoc sphæricum. Llyn Coron, Anglesea, near Caernarvon.
Anabaina Jacobi, (*Sphærozyga Jacobi,* Berk. in Eng. Bot. t. 2826, fig. 2). Northamptonshire; Rev. M. J. Berkeley. Swansea? not certain about the species.
Eutomia rotata. Penzance; Swansea; many places in North Wales.
——— *oblonga.* Penzance; Caernarvon.
Chroolepus Arnottii. On the root of a yew, Penn's Rocks, Tonbridge Wells; Mr. Borrer.
Meloseira varians. Sussex; Mr. Borrer, who is of opinion that it is not uncommon. Penzance; Tavistock; Dolgelly.
Desmidium Swartzii. Penzance; Swansea; Dolgelly; Caernarvon.
Fragilaria aurea. Mount's Bay.
——— *diatomoides.* St. Michael's Mount; Land's End.
——— *hyemalis,* Lyngb. Tavistock, Devonshire; and Dolgelly, North Wales; near Barmouth; Rev. T. Salwey.

Achnanthes longipes. Shoreham Harbour, Sussex; Mr. Borrer. Ilfracombe.

——— *exilis*, Kutz. Oswestry, Shropshire; Rev. T. Salwey. Cader Idris, North Wales; and near Penzance.

Isthmia obliquata. Ilfracombe

Diatoma tenue. Henfield and Lewes, Sussex; Mr. Borrer.

Exilaria fulgens. Ilfracombe.

Meridion circulare. Sussex; Mr. Borrer. Aberdeen; Mr. Dickie. Oswestry; Rev. T. Salwey. Dolgelly.

Licmophora splendida. Salcombe, abundant on Griffithsia corallina.

——— *flabellata*. Mount's Bay; Land's End.

Gomphonema Berkeleyi. Northamptonshire, not uncommon; the Rev. M. J. Berkeley. Henfield, Sussex; Mr. Borrer. Shrewsbury; Mr. Leighton.

Berkeleya fragilis. Southampton; Miss Hill.

Schizonema obtusum and *ramosissimum*. Milford Haven.

——— *helminthosum*. Mount's Bay and Teignmouth.

——— *virescens*. Mount's Bay.

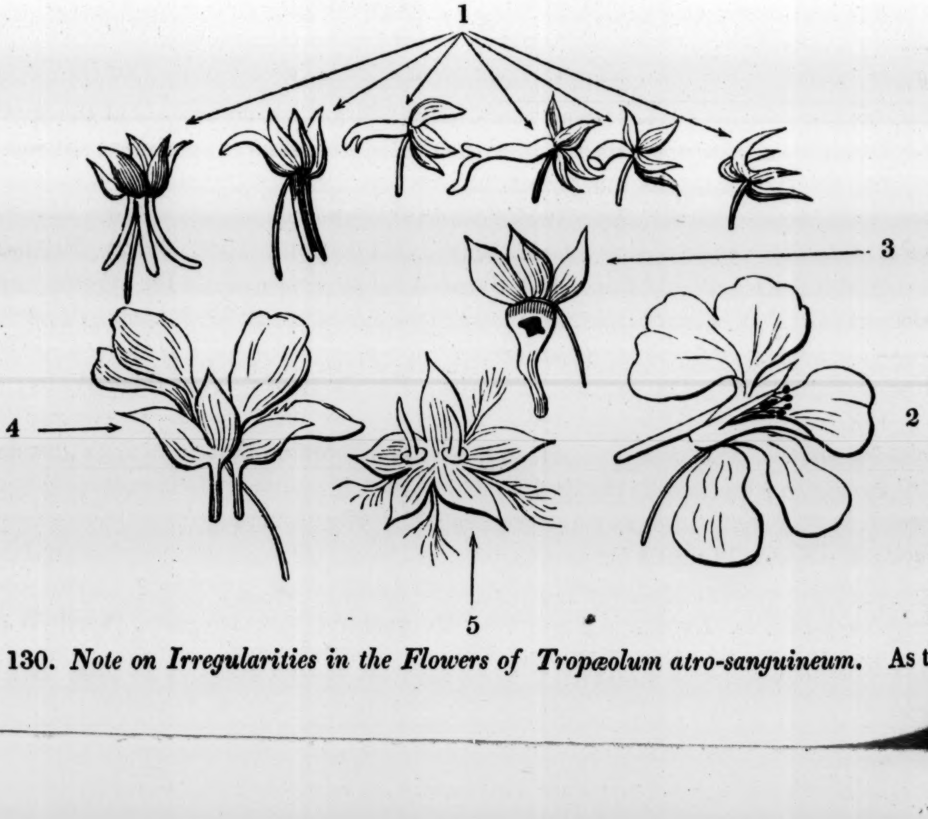
——— *implicatum*. Teignmouth.

——— *comoides* and *Grevillii*. Ilfracombe and Milford Haven.

Figures in 'English Botany' not quoted in the Manual.

Vaucheria cæspitosa, t. 2841.
Bulbochæte setigera, t. 2086.
Ulva Linza, t. 2755.
—— *crispa*, t. 2754.
Enteromorpha intestinalis, t. 2756.
Polysiphonia cristata, (*Fucus cristatus*), t. 1925.
Achnanthes brevipes, t. 2842, fig. 1.
Odontella aurata, t. 2842, fig. 2.

ART. LXI. — *Varieties.*



130. *Note on Irregularities in the Flowers of Tropæolum atro-sanguineum.* As the

observation of the irregularities in plants is not only interesting in itself, but has also proved useful in establishing the laws which regulate their growth, I beg leave to forward to you the accompanying sketch of some which I observed in the autumn of 1836, on a bed of Tropæolum atro-sanguineum. No. 1 represents a series of the calyx and spur, showing a gradual change from an almost complete absence of the spur to the development of three. In another instance where the spur was absent, its place was supplied by an additional sepal. In No. 2 the spur was fully developed, and another spur was formed, which was inverted, and its point appeared among the stamens: in the figure the petals are turned back to show its position. No. 3 is the external appearance of the spur, showing the place where the second spur is inverted. The same irregularity I have frequently observed since that time; and in 1837 I found an instance (No. 4), in which two spurs were developed and both inverted, presenting the appearance in the inside of the flower represented in No. 5. On each of the points I found a small drop of honey.—*Anna Carpenter; 2, Great George St., Bristol, January* 18, 1842.

131. *List of Mosses &c. collected in Wharfedale, Yorkshire.* The plants mentioned in the following list were collected in Wharfedale, Yorkshire, on the 18th and 20th of December, 1841; they were all found within a space of a little more than three miles along the banks of the Wharfe, extending from Bolton Abbey to Barden Tower, where the mill-stone grit is the prevailing geological formation. When I state that the season was one of extreme severity; that I had in most instances to clear away the rime before I conld ascertain what I was collecting; and lastly, to cut up the frozen masses with my knife;—I think the collection will be considered an interesting one. I have to acknowledge my obligation to Dr. Taylor for clearing up my doubts with regard to a few of the species.

Musci.

Gymnostomum viridissimum
Tetraphis pellucida
Weissia fugax, *Hedw.*
Grimmia rivularis, *Bridel.*
Didymodon rigidulus
    capillaceus
Trichostomum lanuginosum
Dicranum flavescens
Cinclidotus fontinalioides
Bryum gracile, *Wils.**
    marginatum
Bartramia gracilis
Neckera pumila
    crispa
Anomodon curtipendulum
    viticulosum
Hypnum populeum
    plumosum
    brevirostre

Hepaticæ.

Jungermannia asplenioides; a variety with entire leaves
    pumila
    sphærocarpa
    ventricosa
    connivens
    nemorosa, γ. recurvifolia
    scalaris
    barbata, β. minor
    trichophylla
    platyphylla, 2 or 3 vars.
Jungermannia lævigata
    tomentella
    serpyllifolia
    minutissima
    Tamarisci
    furcata, β. elongata

Lichenes.

Bœomyces roseus
Endocarpon miniatum
Parmelia herbacea
Sticta pulmonaria
Collema lacerum
    ceranoides, *Borr. in E. Bot. Supp.*
Solorina saccata
Sphærophoron compressum

—*Richard Spruce; Collegiate School, York, March* 4, 1842.

132. *Note on Didymodon flexicaulis.* I may add that I observed Didymodon flexicaulis, *Scleich.*, in considerable quantity near Skipton; it appears to be common in

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* Discovered by Mr. Wilson in 1833.

Yorkshire, as I have gathered it on the magnesian limestone near Tadcaster, and Mr. Ibbotson finds it at Castle-Howard. Dr. Greville, too, informs me that he noticed it last autumn in various parts of Craven.—*Id.*

133. *Mosses near Castle-Howard.* After my visit to Wharfedale, I passed a short time in the neighbourhood of Castle-Howard; but the continuance of the storm prevented me from botanizing to any extent. I had, however, the pleasure of discovering, in company with Mr. Ibbotson, Hypnum Blandovii and Bryum affine,* in the same bog where he had a short time previously gathered Leskea dendroides (in fruit) and Hypnum nitens. Pursuant to a suggestion from Mr. Wilson, we intended to search further in the same locality for Bryum squarrosum, which Mr. W. discovered in Cheshire accompanying the plants above named, but were disappointed by the setting in anew of the frost and snow. A letter however from Mr. Ibbotson, dated 28th February, contains the interesting intelligence that he has found Hypnum nitens and Bryum affine coming copiously into fruit; and, more than all, the wished-for Bryum squarrosum in equal abundance! To use his own words, — " there is a space of not less than an acre, on which this and Hypnum nitens are the chief plants."—*Id.*

134. *Trifolium incarnatum.* Although Trifolium incarnatum has been introduced into some of our later botanical catalogues as an indigenous production, it does not appear to be often met with. Mr. Peete, and another experienced botanist whom I have consulted, have never seen it, except as a cultivated plant, in the fields. It may not, therefore, be uninteresting to mention, that I met with a very fine cluster of it, in full bloom, about the beginning of last June, on a piece of waste land at Norwood, in Surrey, quite away from any fields where the plant was likely to have been sown for agricultural purposes. I have no doubt at all of the identity of the flower. In Martyn's 'Flora Rustica' Trifolium incarnatum is said to vary in the colour of the spike, from bright to very pale red; the colour of my specimens was a very beautiful bright red. If it should be practicable to visit the same spot this year, at the proper time, I shall see whether the plant has maintained its position there. I do not doubt at all that it would be most proper to consider the plant which I found as an accidental occupant of the soil; but, when we find that this elegant species of Trifolium has been seen in such sterile spots as the Lizard Point in Cornwall, by the Rev. Mr. Hore; on the sands, in two separate places in Jersey, by Mr. Babington; and again, on the gravelly soil of Norwood; — we may yet hope to meet with its bright silky flowers in sufficient abundance materially to enhance the charms of our English Flora. — *William Ilott; Bromley, Kent, March* 7, 1842.

135. *New localities for Carex elongata.* Will you allow me, through the medium of your valuable and excellent little journal 'The Phytologist,' (for the institution of which the botanical world owes you a lasting debt of gratitude), to make known to you and your readers the discovery of no less than *five* additional habitats for one of the most rare and beautiful of our British Carices;—I allude to Carex elongata, *Lin.* This species, as you are well aware, for many years had only *one* authentic station in this country, first recorded by the late Mr. Jonathan Salt, who found it on the banks of the Don, near Sheffield. It was afterwards gathered at Colemere, in Shropshire, by the lamented J. E. Bowman, Esq., of this place, who obligingly furnished me with a specimen from that locality. My friend Mr. Wilson, of Warrington, also discovered

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* Frequent near York, in moist situations.

it many years ago at Over, where, he writes me word, it still exists in small quantity. Lastly, it is recorded in the Yorkshire Flora, as being found in the neighbourhood of Boroughbridge. One of the five new localities is at a place near Town-lane Bridge, which crosses the Worsley Canal near Tildsley, about nine miles from Manchester: the plant here grows in an alder-swamp in great abundance, and was first discovered several years since by Mr. John Martin, a humble but ardent investigator of the arcana of Nature, who resides near the spot; by him it was sent to Mr. Wilson, who determined its identity. The second locality was discovered by my friend Mr. Buxton, on the 24th of last May, about four miles from Manchester, near the village of Chorlton, where it exists in profusion, encircling and growing in three large ponds, or, as they are technically termed here, "*pits:*" and this habitat, I may remark *en passant*, is one that is not likely to be destroyed by the ruthless and unsparing hand of *improvement*, either real or imaginary. Mr. B. also found it a few days prior to this, in considerable plenty, on the swampy banks of Rostherne Mere, Cheshire, a large and beautiful inland lake, and a locality rich in botanical productions, particularly in the genus Carex. The fourth locality is one that was pointed out to me when on a visit to Warrington last summer, by Mr. Wilson, who had long been aware of its existence there: the "pit" is in a field near to Bruch Farm, about a mile and a half from Warrington, on the road to Manchester, and here, likewise, it is in great abundance. During our rambles together on the same day, we again met with this delightful plant in very great quantities, completely lining the sides of the ditch for a very considerable distance; this was previously entirely unknown to Mr. Wilson, and you may be assured our delight was commensurate with the value of the discovery. The name of the lane I do not at this moment remember, but it is in the immediate vicinity of Warrington, and would be most readily pointed out to any one happening to visit that neighbourhood, and who might be desirous of gathering it, by Mr. Wilson, whose courtesy and urbanity to all who are ambitious of increasing their knowledge in natural science, is such as to merit the highest meed of praise.—*J. B. Wood, M.D.; Broughton, near Manchester, March* 9, 1842.

136. *New locality for Carex axillaris.* It also affords me much pleasure to add another to the localities already known for the equally rare Carex axillaris. This was also found by my indefatigable friend Buxton, in company with Mr. J. Martin, on the 30th of last May (1841), about one mile west of Leigh, in Westleigh, and about ten miles from Manchester: the plant was growing sparingly from the hedge-bank, and much cropped by cattle. In connexion with this species, perhaps you will permit me to observe, that during a short stay in York last summer, on my return from a very prosperous botanical visit to Teesdale, I had the pleasure of calling upon Mr. Baines, the author of the excellent 'Flora of Yorkshire;' and in looking over his duplicates, I met with a single specimen of Carex axillaris, which is now in my herbarium. It was not then known to him, but *he assured me most confidently that he had gathered it himself* in Heslington fields, near York, shortly before, and that, as far as his recollection served him, it was in considerable quantity. I hope, however, that either Mr. Baines, or some other resident botanist, will elucidate this fact clearly and satisfactorily, and favour us with the result of his investigation through the pages of 'The Phytologist,' which are always open for the promulgation of truth and the advancement of botanical science.—*Id.*

137. *List of Mosses &c. collected chiefly at Leith Hill, Surrey.* I returned this morning from a two days' excursion in Surrey, whither I had accompanied my friend

Mr. Ward, in quest of fresh air, exercise, scenery and health, and at the same time to renew my acquaintance with whatever mosses and Hepaticæ might fall in my way. As many of your readers may not be aware how large a portion of the plants composing these two most interesting orders may be discovered so near London, and in so short a time as that which we devoted to searching for them; I subjoin a list of all that we found, marking those which grew on Leith Hill or its neighbourhood with the letter L; those at Box Hill, Headley, or Walton, with the letter B. To these places only, I should say, did our ramble extend. The species not in fruit are marked 0.

- Phascum subulatum, L. B.
  - muticum, L.
  - cuspidatum, B.
- Sphagnum acutifolium, L.0
  - obtusifolium, L. 0
- Gymnostomum truncatulum, var. β. B.
- Weissia controversa, L.
- Didymodon purpureus, L. B
  - rigidulus, L.
- Trichostomum canescens, B. 0.
- Dicranum bryoides, β. L.
  - adiantoides, L.
  - taxifolium, L.
  - undulatum, L. 0.
  - scoparium, L.
  - varium, B.
  - heteromallum, L. B.
- Tortula rigida, L.
  - muralis, & var. β. L. B.
  - ruralis, L. B.
  - subulata, L.
  - unguiculata, L. B.
  - fallax, L.
- Polytrichum undulatum, L. B.
  - piliferum, B.
  - juniperinum, L.
  - commune, L.
  - urnigerum, B. 0.
  - aloides, L. B.
- Orthotrichum affine, B. β. L.
  - striatum, L.
  - crispum, L.
- Bryum palustre, L. 0.
  - argenteum, L. 0
  - capillare, B.
  - cæspititium, L. B.
  - nutans, L.
  - ligulatum, B. 0.
  - punctatum, L.
  - hornum, L.
  - cuspidatum, L.
- Bartramia pomiformis, L.
  - fontana, L. 0.
- Leucodon sciuroides, L. 0.
- Neckera pumila, L.
- Daltonia heteromalla, B.
- Hypnum trichomanoides, L
  - complanatum, L.
  - undulatum, L. 0.
  - denticulatum, L. 0.
  - tenellum, L.
  - serpens, L.
  - purum, B.
  - piliferum, L. 0.
  - Schreberi, L. 0.
  - sericeum, L.
  - alopecurum, L. 0.
  - curvatum, L.
  - myosuriodes, L. B.
  - splendens, L.
- Hypnum proliferum, L. B. 0
  - prælongum, L.
  - rutabulum, L.
  - velutinum, L.
  - ruscifolium, L.
  - striatum, L.
  - confertum, L. B.
  - cuspidatum, L. B. 0.
  - stellatum, β. B. 0.
  - loreum, L. 0.
  - triquetrum, L. 0.
  - squarrosum, L. 0.
  - cupressiforme, L. B.
    - and var. γ. B.
  - molluscum, B. 0.
- Lunularia vulgaris, with gemmæ, L.
- Jungermannia epiphylla, L
  - β. longifolia, L. 0.
  - endiviæfolia, L. 0.
  - furcata, L. 0.
  - asplenioides, L. 0.
  - emarginata, L. 0.
  - bicuspidata, L. B.
  - undulata, L. 0.
  - albicans, L.
  - complanata, L. 0.
  - scalaris, L.
  - bidentata, L.
  - reptans, L. 0.

I am not sufficiently acquainted with the Botany of the neighbourhood of London to know whether any of the above are of rare occurrence; if they are, I shall be happy to give such directions to any of your correspondents as will enable them to procure specimens for themselves. In the course of our ramble we observed Lycopodium clavatum, in considerable abundance, near the summit of Leith Hill, and Mr. Joseph Ward met with a solitary specimen of Lyc. Selago. — *C. A. Johns*; 11, *Manchester Buildings*, *Westminster*, *March* 19, 1842.

138. *New Habitat for Bryum Tozeri and Hypnum catenulatum.* In the course of a ramble with Mr. Ward from Greenhithe to Swanscombe, on Saturday last, April 9,

I had the good fortune to discover the Hypnum catenulatum of Schwægrichen growing on a hedge near Betsham. It differs (as you will see by the enclosed specimen) from the plant bearing the same name described by Hooker, in being furnished with a nerve which disappears above the middle of the leaf, while in Hooker's plant the nerve is not more than one fourth the length of the leaf. Bryum Tozeri, which has not yet, I believe, been found east of Devonshire, grows very abundantly on the perpendicular side of a deep sand-pit in Swanscombe Park Wood. Its foliage is very luxuriant, but though it bears what appears to be male fructification freely, I could not discover any setæ.—*Id. April* 13, 1842.

139. *Note on Lolium multiflorum,* (Phytol. 136). The Lolium I now enclose is the one mentioned at p. 136 of 'The Phytologist.' This plant was found in great profusion near Manchester in June, 1840, by Messrs. Crozier and Eversfield of that town; they sent me this plant under the name of Lolium perenne, var., they also sent it to my friend Mr. Leyland, of Halifax. A short time afterwards Mr. Leyland was in a seed-shop in that town, where they told him they had a new grass imported under the name of "Italian ray-grass." It struck Mr. Leyland forcibly that this must be the same as the Manchester Lolium, he of course procured a few of the seeds and had them sown, and on flowering, the plants turned out to be what he expected. In June, 1841, in company with my friend Mr. Baines, of York, I visited the neighbourhood of Tadcaster, to collect Monotropa Hypopitys, a few of the Carices, &c. We met with a farmer in that part who took us a little out of our way to look at a new grass he told us they had just received seeds of; on our arriving at the place it was what I expected—the Italian ray-grass.—*Samuel Gibson; Hebden Bridge, December* 13, 1841.

140. *Note on the two forms of Monotropa.* As it is not perhaps generally known that we have two very different forms of Monotropa growing in England, the following account of them may be acceptable to some of the readers of 'The Phytologist.' 1. *Monotropa Hypopitys* of authors. In this form of the plant the edges of the outer petals (or what Gray calls the calyx) ciliated with strong hairs; inside of the inner (or true) petals densely covered with the same kind of hairs; stamens also hairy, hairs pointing forward. This form of the plant grows in shady woods, in soil composed of the decayed leaves of trees. I have specimens of the above form from the following localities:—East Kent, collected about 1836, sent to me by my friend E. H. Bulton, Esq.: Cotswold Hills, by Mr. Lees: Reigate, Surrey, by Mr. Luxford: and from Jackdaw Crags, near Tadcaster, Yorkshire, gathered in that locality by myself. I have also a specimen from the late E. Hobson, answering to the above characters, but the locality is unknown to me. 2. *Monotropa lævipetala*, mihi. In this, the more rare form of our Monotropa, the outer and inner petals are smooth in every part; the stamens also are quite smooth. This plant grows in sand, as at Southport, &c. I have a specimen of this form from the north-west end of Selborn Hanger, for which I am indebted to my friend Mr. Tatham; and have seen other specimens from the same locality, all of them answering to the above characters. I have also specimens gathered at Southport in 1840, by Linnæus Aughton (said to be the original discoverer, Phytol. 149), and others gathered by a lady in 1836. Besides these I have a specimen gathered at Southport in August, 1789, by the late James Bolton, author of 'Filices Britannicæ.' This specimen was in the herbarium of the late Dr. Dinely; that herbarium was sold by auction about twenty-five years ago, and fell into my hands for the small sum of two shillings and sixpence; it contained a few rare plants, such as Cardamine bellidifolia, &c. Specimens of this plant [Monotropa] gathered fifty

years ago perfectly agreeing with specimens gathered at the present time, will, I think, be sufficient to show that the smoothness of the petals of the Southport Monotropa is not accidental; and as this plant is destitute of hairs on the petals and stamens, perhaps it is destitute of smell also.—*Samuel Gibson; March* 15, 1842.

141. *List of Algæ from Jersey.* The list of Guernsey Algæ by Dr. Greville, (Phytol. 172), induces me to send you a list of Jersey Algæ collected by Miss M. White, a zealous Algologist. Except a few of the commonest and largest species, I have seen and identified specimens of all of them.

- **Cystoseira granulata**
  - **fœniculacea**
  - **fibrosa**
- **Halidrys siliquosa**
- **Fucus vesiculosus**
  - **serratus**
  - **nodosus**
  - **canaliculatus**
  - **tuberculatus, plentiful in two spots near St. Helier's**
- **Himanthalia lorea**
- **Lichina pygmæa**
  - **confinis**
- **Laminaria digitata**
  - **bulbosa**
  - **saccharina**
- **Desmarestia ligulata**
  - **aculeata [rare**
- **Sporochnus pedunculatus,**
  - **rhizodes**
- **Haliseris polypodioides, not common**
- **Padina pavonia, in two places near St. Heliers.**
- **Dictyota dichotoma**
- **Punctaria plantaginea, not very common**
- **Asperococcus Turneri**
  - **echinatus**
- **Chorda lomentaria**
  - **Filum**
- **Cladostephus verticillatus**
  - **spongiosus**
- **Sphacelaria scoparia**
  - **cirrhosa**
- **Ectocarpus littoralis**
- **Chordaria flagelliformis**
- **Naccaria Wigghii, very sc.**
- **Dumontia filiformis**
- **Halymenia ligulata, rather common**
- **Iridæa edulis**
- **Polyides rotundus**
- **Furcellaria fastigiata**
- **Delesseria sanguinea**
  - **sinuosa**
  - **alata**
  - **Hypoglossum**
  - **ruscifolia**
- **Nitophyllum punctatum, ra.**
  - **laceratum**
  - **lacerat. β. uncinatum**
- **Rhodomenia laciniata**
  - **Palmetta**
  - **ciliata**
  - **jubata, common**
  - **sobolifera, common**
- **Plocamium coccineum**
- **Rhodomela subfusca**
  - **pinastroides, plentiful**
- **Bonnemaisonia asparagoides, rare**
- **Laurencia pinnatifida**
  - **obtusa**
  - **tenuissima, rare**
- **Chylocladia clavellosa, not**
  - **ovalis [com.**
  - **kaliformis**
- **Gigartina purpurascens**
  - **confervoides**
- **Chondrus crispus**
  - **membranifolius**
- **Sphærococcus coronopifolius, sometimes abun-**
- **Gelidium corneum [dant**
- **Ptilota plumosa**
- **Polysiphonia fruticulosa**
  - **thuyoides**
  - **nigrescens**
  - **urceolata**
  - **fastigiata**
  - **fibrata**
  - **elongata**
  - **byssoides**
- **Dasya coccinea**
- **Ceramium rubrum**
  - **ciliatum**
- **Spyridia filamentosa, not very common**
- **Griffithsia equisetifolia**
  - **multifida, very com.**
  - **corallina, not uncom.**
  - **setacea**
- **Callithamnion Hookeri, rather scarce**
  - **tetricum**
- **Conferva rupestris**
  - **ærea**
  - **implexa**
- **Codium tomentosum**
- **Calothrix confervicola**
- **Bangia fusco-purpurea**
- **Lyngbya majuscula**
  - **Carmichaelii**
- **Porphyra laciniata**
  - **vulgaris**
- **Ulva latissima**
  - **Linza**
- **Enteromorpha compressa**
- **Achnanthes longipes**
- **Diatoma marinum**
- **Exilaria fasciculata**
- **Gomphonema paradoxum**

On a comparison of the two lists it will be found that more than thirty of the Jersey

species are not mentioned in Dr. Greville's, which however contains about twenty not included in the above list. — *John Ralfs; Penzance, March* 23, 1842.

142. *Reappearance of Gelidium rostratum in Scotland.* Having seen in the notice of Harvey's 'Manual of British Algæ,' in 'The Phytologist' (Phytol. 124) that an observation is made on the long-disputed plant Gelidium rostratum, that it has not been found for thirty years; I think it will be interesting to your readers to learn that it has again made its appearance. By the kindness of Mr. Dickie of Aberdeen, I have received very fine specimens, gathered by him at intervals from December 1841 to March of the present year, the latter fresh, and with ripe fruit of both kinds, some of them eight inches long; Mr. D. had one measuring twelve. I have again examined these beautiful plants, and have requested a friend to submit them to higher powers of the microscope than I possess, and the result of both is a full confirmation of my former opinion, that it is decidedly a distinct species, differing in structure from Delesseria alata, and that its nearest generic affinity is Gelidium. Mr. Dickie informs me that some fragments were found two years since, and that he has received it lately from Montrose; and as Mr. Brodie originally discovered it at Lossiemouth, it has a considerable range of coast. Mr. Dickie also informs me that it is a deep-water plant — growing on the old stems of Laminaria digitata, together with Delesseria alata and Ptilota plumosa, cast up after storms. — *Amelia W. Griffiths; Torquay, April*, 1842.

143. *Note on Trichonema Columnæ.* In my paper on the Botany of Devon and Cornwall (Phytol. 160), I have stated that no plants of Trichonema Columnæ were found during the spring of last year on the Warren at Exmouth, the habitat referred to in the British Flora. I was induced to make this statement on the authority of a botanical friend well acquainted with the plant. From the nature of this interesting species I was induced to think that some ruthless collector had extirpated it from the Warren, as it did not appear to me probable that flowering bulbs could be in existence without disclosing their charms at the proper season. This, and to supply the wants of our Botanical Societies, led me, on Tuesday last, to visit Exmouth for the express purpose of seeking out the truth relative to it. Although rather early for it, I was gratified in finding it scattered over the waste of sand in several places, but not in abundance. It grew amongst the grass (that is, where the grass formed a kind of turf) at the western end of the Warren. Cladonia rangiferina is in abundance in its neighbourhood, and seems to confine it within certain limits, as I did not find a single specimen protruding from amongst this Lichen where it prevailed in large quantities. — *W. S. Hore; Stoke, Devonport, April* 7, 1842.

144. *Narcissus poeticus.* I am informed by Miss A. Griffiths, that Narcissus poeticus has been found on the Warren by Mrs. Wyatt, the publisher of the beautiful volumes of Devonian Algæ. — *Id.*

145. *Note on Primula elatior.* During a recent excursion upon the continent, whilst botanizing near Spa, in Belgium, I found, growing under some nut-bushes upon the banks of one of the numerous mountain streams in the neighbourhood, three young plants of Primula elatior in flower. Throughout the whole of my walk I did not observe a single specimen of the other two species, — P. vulgaris and veris. The plants in question appeared to be about three years old. — *James Edward Moxon; Leyton, Essex, April* 13, 1842.

146. *Bupleurum tenuissimum.* About the middle of last August in walking through some fields on the north of Highgate (I am unable to describe the place, as I was never there before or since), in one field I observed a quantity of Polygonum Aviculare

growing in a place where water had evidently stood, though then dry. Induced by its luxuriance I gathered a handful, but did not look at it until I had gone a considerable distance, when, on examination, I found I had another plant mixed with it, which proved to be Bupleurum tenuissimum, a specimen of which I enclose and beg your acceptance of.—*William Mitten; 91, Blackman St., Borough, April* 14, 1842.

[We beg our correspondent to accept our thanks for the very fine specimen he has so obligingly sent; it is larger than any we had previously seen. On turning to Milne and Gordon's 'Indigenous Botany,' we find it recorded that this species was found "by Merret, at *Paddington* beyond the bridge in the way to *Harrow upon the Hill*, whence it is now probably extirpated." The re-discovery of this plant in the neighbourhood of the metropolis, is a very interesting circumstance.—*Ed.*]

147. *Oxlips found at Bardfield, supposed to be identical with the Primula elatior of Linnæus.* I send you some oxlips from Bardfield, in Essex, which, from a notice in the Gardener's Chronicle of the 12th of March, appear to me to be identical with what the writer calls the true Primula elatior of Linnæus and the German botanists. They have nodding flowers, and in no instance have I seen single-flowered stalks, as in the primrose. They vary but little, and apparently owing to some having a more favourable situation than others. They cannot be hybrids, for the primrose does not exist in the parish, and these oxlips grow by thousands in the meadows, and in moist woody places adjoining: in one instance a meadow of about two acres is entirely covered by them, being a very mass of yellow bloom. Pagils or cowslips also occur in the neighbourhood, but prefer dry ground.—*Henry Doubleday; Epping, April* 20, 1842.

[The Primula elatior "limbo corollarum plano" of Linnæus, is the var. β. of his P. veris; var. α. officinalis, being our cowslip and var. γ. acaulis, the primrose; (Sp. Pl. 204, ed. 3). The passage in the Gardeners' Chronicle referred to by Mr. Doubleday, is given below.—*Ed.*]

148. *The Oxlip.* A notice in the *Gardeners' Chronicle* (Oct. 9, 1841),* upon the respective relations of an old and long-disputed family, the Primrose, Cowslip, and Oxlip, although correct in the main, requires a few observations to make the state of the case perfectly clear. It is probably true that the English Primula elatior or Oxlip (not that of Linnæus and the continental botanists) is a hybrid between the common Primrose (P. acaulis) and the Cowslip (P. officinalis). Two reasons may be adduced for this belief: 1st, That England is almost the only country in which the Primrose and Cowslip are found in company with each other; the former being on the continent rather a southern plant, ranging from France to Calabria and Asia Minor; the latter a northern one, ranging from Finland to the top of the Alps. Both species, may, indeed, be found in mountainous parts of the south of Europe; the P. officinalis on the higher parts of the Apennines, and the P. acaulis in the low warm grounds of Florence and Naples—but not together, nor does the English Oxlip seem to be known in those countries. The union of the Cowslip and Primrose in our banks and meadows is no bad type of the climate of England, in which the representatives of the northern and southern flora are found side by side, and what wonder if a hybrid be the result? In confirmation of this view of the true place of the English Oxlip, it must be familiar to every gatherer of wild flowers that Oxlips differ greatly from one another, as seedling varieties and their descendants often do. Some are more like

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* No. 149, next page.

one parent, some like another, and perhaps their produce may be neither pure nor constant. Some Oxlips are scarcely anything else than larger-flowered Cowslips, and others appear to be merely caulescent, or rather scapescent Primroses. We look in vain for a specific character. But with regard to the German Oxlip, the true P. elatior of Linnæus and of the German botanists, and which is not yet known to be a native of England or of north-western Europe, the case is different. It is found in great abundance throughout Germany, south of the Neckar, and as far as the Italian side of the Alps, in the pastures of the Tyrol. It seems to be subject to no varieties, and is found not intermixed with other species, unless, perhaps, with some of the Alpine species in their peculiar localities. It has a peculiar cramp habit of leaf, a rough scape, nodding flowers, swelling calyx, and is scentless. In beauty it is inferior to either our Oxlip or Cowslip, or to P. Columnæ or suaveolens of Italy. It may rank, perhaps, with P. Pallasii. The English Oxlip is only known on the continent by its garden varieties, namely, the Polyanthus tribe. Perhaps the north and west of France, where the climate is the same as in England, should be excluded from these observations regarding the continent; as it is possible that Brittany and Normandy may possess both Primrose and Cowslip, and consequently the Oxlip. — *S. in Gard. Chron. March* 12, 1842.

149. *The Primrose, Cowslip and Oxlip.* In your report of the Proceedings of the Botanical Society of Edinburgh, p. 645, it is stated, in reference to the variable offspring of Polyanthus-seed, that "several members expressed their belief that the varieties arising from Primula vulgaris and P. elatior of British authors, may be correctly referred to one species; but that the P. veris is a distinct and well-marked species, never seen to amalgamate with, or pass into the others." Bearing on this point, one or two cases have come under my notice which seem to lead to a contrary conclusion. I once saw a number of seedlings from the Cowslip (P. veris), among which there was as great a diversity, both in form and colour, as is generally found in a bed of seedling Polyanthuses. Many retained the Cowslip form, but varied in colour from deep yellow, through all the gradations, to dark red; others, again, approached the Polyanthus in breadth of corolla. On the other hand, the Primrose (P. vulgaris) does not appear to vary much in form, but only in colour, when raised from seed. At Kiplin, in Yorkshire, the seat of the Earl of Tyrconnel, there are Primroses of more than a dozen distinct shades of colour, which must originally have sprung from seed; but although there are thousands of plants, I have no recollection of ever seeing one among them with more than a single flower on a stalk, or betraying any disposition to assume the cupped corolla of the Cowslip. Might not the Oxlip (P. elatior) be a hybrid between the Cowslip and the Primrose? The flowers of the common Primrose on the flower-stalk of the Cowslip, would be a near approach to the Oxlip. It is much less common (at least wherever I have been) than either the Cowslip or the Primrose, which seems to indicate that it is not reproduced freely by seed.—*J. B. Whiting.*— [This is also the opinion of some good botanists].—*Gardeners' Chronicle, October* 9, 1841.

150. *The Polygonum maritimum* mentioned in my list (Phytol. 144), I find to be an error; it is not the true P. maritimum, but P. Raii, as figured in the Supplement of Sowerby's 'English Botany.'—*J. W. G. Gutch;* 38, *Foley Place, February* 2, 1842.

151. *Errata.* Phytol. p. 132, line 4 from bottom, for *F. Rupert* read *F. Russell.* P. 138, line 6, for *Harmton* read *Naunton.* P. 176 line 18 from bottom, for *E. H. Button* read *E. H. Bulton.* P. 178 line 7, for *W. Charlton* read *W. Chorlton.*

ART. LXII.—*Proceedings of Societies.*

LINNEAN SOCIETY.

March 1st.—Dr. Horsfield in the chair. A present of a collection of plants from Dr. Barratt of America, was announced; the collection consisted chiefly of Carices and Eupatoria. Read, a letter from W. Borrer, Esq., in which that gentleman offered to the Society his extensive and valuable collection of foreign Phænogamous plants; including European plants from Hooker, Woods, Mertens, and others; American plants from Drummond, Gardiner, &c.; plants of Arabia, Abyssinia, the Pyrenees &c. from the Unio Itineraria; and Lippold's plants of Madeira.

March 15.—Edward Forster, Esq. in the chair. A present of a collection of plants from the Tyrol was announced. Read, a paper by Dr. H. Faulkner, on Edgworthia, a new genus of plants from lower Affghanistan, belonging to the order Myrsinaceæ; a remarkable point in which is the protrusion of the style beyond the flower, even when in bud. The only species of the genus — E. buxifolia, is found associated with Dodonæa dioica, an Olea, and an undescribed Asclepiadeous plant.

April 5th.—Robert Brown, Esq., in the chair. Specimens of Crocus vernus, gathered by Mr. Flower near Hornsea Church, were exhibited by him. The receipt of the herbarium of the late Professor Don, according to his bequest, was announced, as well as a collection of hard fruits and sections of woods.

BOTANICAL SOCIETY OF EDINBURGH.

Thursday, April 14*th*.—Professor Christison in the chair. The following communications were read.—

1. Professor Balfour of Glasgow made some remarks on the natural order Lecythidaceæ, and exhibited various specimens of the fruit of Lecythis and Couratari, from Brazil. Dr. Balfour also exhibited specimens of various fossil palms, which had been found embedded in sandstone collected at Stevenston, Ayrshire, by the Rev. David Landsborough. He likewise exhibited specimens of the snake-nut, brought by Dr. Campbell from Guiana; and communicated from Mr. W. Gourlie, Glasgow, a specimen of a large Sphæria attached to a West-Indian caterpillar, and which had commenced its growth during the life of the animal.

2. Dr. Balfour read extracts from a letter addressed to him by Mr. Edward Forbes, dated H.M.S. Beacon, Macri, Asia Minor, February 28th, 1842. Mr. Forbes's cruise round the islands of the Archipelago, although rich in results as regards marine Zoology and tertiary Geology, had been almost fruitless in Botany, in consequence of the season.

3. Dr. Balfour read his Report on the Progress and State of Botany in Britain, from February 1840 to January 1841; being a continuation of a paper on the same subject by Dr. Greville, printed in the Society's Transactions.

4. Dr. Balfour next read a communication from Mr. Ralfs, of Penzance, on the following species of Algæ. — 1. *Homœocladia anglica*, concerning which there appears to be considerable confusion, some looking upon Mr. Ralfs's specimens as Schizonema xylodes, others as Oscillatoria chthonoplastes; and Harvey notices them under the name of Microcoleus marinus. Mr. Ralfs was satisfied of his plant being the true Homœocladia anglica, by comparing it with a specimen in the herbarium of Mr. Berkeley. 2. *Desmidium compressum*, a new species of the genus, concerning which Mr. Berkeley remarks, — "I am quite delighted with your new Desmidium; your observations are very correct. I see very distinctly the gland between each pair of segments; but as there are no separate joints in my specimen, I cannot quite ascertain its form.— It is certainly quite distinct from the other species, and a most interesting discovery." Specimens of both these Algæ, as well as of Desmidium Borreri, were presented to the Society.—*Abridged from the Edinburgh Evening Post and Scottish Standard of Wednesday, April* 20, 1842.

BOTANICAL SOCIETY OF LONDON.

March 18.—John Edward Gray, Esq., F.R.S., &c., President, in the Chair. The following donations were announced: — Parts 1, 2 and 3 of 'Algæ Danmonienses,' and Fasciculus 1 of Berkeley's British Fungi, presented by Mrs. Margaret Stovin. British plants from the Royal Horticultural Society of Cornwall, Messrs. Edwin Lees, J. Buckman and J. G. Mitchell. British Mosses from Hewett C. Watson, Esq., V.P. Books from the Leeds Philosophical Society and Mr. H. M. Holman. The following specimens were exhibited:— *Oxalis stricta*, collected near Penzance, presented by the Royal Horticultural Society of Cornwall. *Elacodendron Argan*, Retz, collected in the province of Haha, near Deabet, Barbary, in August, 1840, by Dr. W. Willshire, and presented by him. *Hypnum polymorphum*, Hedw., collected by Mr. William Gardiner, jun. on the sands of Barrie, Forfarshire, in June, 1841, and presented by him.

A paper was read from Edwin Lees, Esq., F.L.S., being "Remarks on the Flora of the Malvern Hills in the counties of Worcester, Hereford and Gloucester. Part 2: — The Hills and their immediate Roots." In geological language the Malvern Hills form an eruptive or igneous chain, stretching in a narrow ridge nearly due North and South for upwards of nine miles. Quartz, felspar, mica and hornblende are their mineralogical ingredients in numberless varied proportions; but it must be understood that the greater part of the mass is in a disintegrated state, breaking up into angular fragments of every size, and thus forming debris on and materials for soil at the base of the slopes, while hard masses of granitic rock, weathering the atmospheric wear and tear of centuries, are of comparatively rare occurrence. This of course tends greatly to modify the capacity of these eminences as depositories of plants; and although rising up boldly in an insular manner in the midst of a flat district, and with no superior heights near at hand, their moderate altitude precludes the growth of any alpine plants; while their complete exposure to the blaze of summer even unfits them for subalpine species that grow in shady localities farther south. This may be instanced in *Saxifraga hypnoides*, which, though it grows in the moist recesses of the Cheddar Cliffs, Somersetshire, is entirely absent from every part of this rocky range. On the other hand, *Sedum album*, which no drought can destroy, finds an appropriate home in the exposed cliffs of the principal hills here, flowering when most other plants are completely withered and burnt up by the intolerable heat.

The Phanerogamous vegetation of the Malvern Hills is by no means so varied or remarkable as might at first have been anticipated from their geographical position. But in fact the breadth of the chain nowhere amounts to a mile, and for the most part does not exceed half a mile. There are scarcely any longitudinal valleys, as in only one place does the chain break distinctly into two parallel heights, and throughout a distance of above nine miles there are but five transverse ones. The average height of the chain above the level of the sea is about 1000 feet, the highest hills attaining respectively the altitude of 1300, 1350 and 1444 feet.—According to a very accurately taken barometrical observation by Mr. Addison of Great Malvern, the Worcestershire Beacon, which, as just stated, is 1444 feet in height by the Ordnance Survey, is only 923 feet above the library at Great Malvern, the slope at the base of the hills being thus shown to be full 500 feet above the level of the Severn. Such a moderate elevation can scarcely be expected to yield plants of an alpine kind, especially when the ravines, though not without rocks, possess none of a very precipitous character, and the streams that trickle down the hills, though abundantly musical, have but very little relation to the torrents that dash in thunder down the cliffs of stern and rugged mountainous regions. The late Mr. Purton (author of the Midland Flora) remarked that even in Wales he scarcely observed any lichens that were not to be found upon the Malvern Hills. In like manner the mosses are very luxuriant and abundant on the hills as well as in the woods around their bases, though the beautiful genus *Splachnum* seems to be altogether absent.—*Jungermanniæ* constitute a great proportion of the investiture of the hills, though the variety of species is not very remarkable, from the comparative scarcity of dripping rocks, yet in one shadowy ravine at least the beautiful *Jungermannia tomentella* is found. *Jung. resupinata* is rather abundant, and *Jung. ciliaris* is excessively common. The *Fungi* are pretty numerous, and, as might be expected, the *Agaric* tribe in particular is profusely scattered on the grassy declivities of the hills in the autumnal season. Many species of ferns are found in extreme profusion on the rocks as well as on every boggy declivity; and in the damp woods on either side the range, *Polypodium vulgare*, *Aspidium aculeatum* and *lobatum* and *Asplenium Filix-fœmina* are particularly abundant; while *Pteris aquilina* covers the sides of the hills in every part. Among the rarer species are *Allosorus crispus* and *Polypodium Dryopteris*, while *Asplenium viride* grows on an old bridge across the Teme, about eight miles north of Great Malvern, on the extreme verge of the district. *Aspidium Oreopteris* is rather plentiful wherever a boggy soil presents itself. *Grammitis Ceterach*, though occurring on old walls at Great Malvern, can scarcely be called a legitimate denizen, for not a stray individual occurs on any of the rocks.

The *Eriophori* are almost the only vascular plants that give anything like a subalpine aspect to the vegetation of Malvern, and even these now only occur in a few favoured spots. *Eriophorum polystachion* and *pubescens* give a pretty aspect to the bogs on the western side of the hills, to which at the present time they are limited; while *E. angustifolium* occupies marshy spots in the low country on the eastern side. The *Cyperaceæ* are pretty abundant in the numerous wet spots about the hills, though mostly of small size, and none very rare or peculiar. The following species have been gathered.—

Scirpus setaceus
Blysmus compressus
Eleocharis palustris
    multicaulis
    pauciflora
Carex dioica
    pulicaris
    intermedia
    muricata
    divulsa.
Carex vulpina
    teretiuscula
    stellulata
    curta
    ovalis
    remota
    axillaris
    pendula
    sylvatica
Carex Pseudo-cyperus
    pallescens
    flava
    Œderi
    fulva
    binervis
    præcox
    pilulifera
    panicea
Carex recurva
    cæspitosa
    stricta
    acuta
    paludosa
    riparia
    vesicaria
    ampullacea
    hirta

The most abundant grasses forming the turf of the hills are *Anthoxanthum odoratum*, *Cynosurus cristatus*, *Festuca ovina*, *Agrostis vulgaris*, *Avena flavescens*, *Aira flexuosa*, *præcox* and *caryophyllea*: those of rarer occurrence are *Aira cristata*, *Triodia decumbens*, *Festuca Myurus*, *Glyceria rigida* and *Nardus stricta*.—The latter indeed is plentiful on the commons at the eastern base of the hills, with most of the commoner grasses. Mr. L. had seen *Avena fatua* in wheat-fields at the base of the hills almost as plentiful as the corn among which it grew. The former marshy state of the country at the eastern base of the hills is shown by the abundance, in spots not yet fully drained, of *Poa aquatica* and *fluitans*, *Phalaris arundinacea*, *Arundo Phraq* tes, *Catabrosa aquatica* and *Calamagrostis Epigejos;* the latter of which forms a dense fringe to the hedges and ditches in marshy fields. The genus *Tyoha* is not very common in the district, although in one or two spots *T. angustifolia* rather prevails. On the rocks appear :—

Cotyledon Umbilicus
Arenaria rubra
Sedum album
Sedum acre
  Telephium
Potentilla verna
Potentilla argentea
Corydalis claviculata
Ornithopus perpusillus
Trifolium striatum
Gnaphalium minimum
Solidago Virgaurea

On boggy ground.—

Veronica scutellata
Pinguicula vulgaris
Blysmus compressus
Eriophorum polystachion
Montia fontana
Anagallis tenella
Hydrocotyle vulgaris
Helosciadium repens
Drosera rotundifolia
Spergula nodosa
Triglochin palustre

Besides the grasses and Carices before mentioned.

In the meadows and commons about the eastern part of the hills. —

Plantago Coronopus
Allium vineale
Polygonum Bistorta
  minus
Ranunculus parviflorus
Euphrasia officinalis
Marrubium vulgare
Mentha piperita
Calamintha officinalis
Cnicus acaulis
Anthemis nobilis
Orchis Morio
Gymnadenia conopsea
Habenaria viridis
  bifolia
  chlorantha
Neottia spiralis

In thickets at the foot of the hills and skirting their bases, wild roses are exceedingly abundant and beautiful, and Mr. Lees had collected the following.—

Rosa spinosissima
  villosa
  scabriuscula
Rosa tomentosa
  inodora
  micrantha
Rosa rubiginosa
  canina
  dumetorum
Rosa Forsteri
  systyla
  arvensis

The deep-coloured blossoms of *Rosa villosa* are very remarkable, and the pale ones of *R. scabriuscula* characteristic ; *R. micrantha* and *systyla* are of frequent occurrence.

The *Rubi* are of equal if not superior luxuriance, in many remarkable forms, which are still under Mr. Lees' observation. It may be here sufficient to state that the glandulose forms are rather abundant : *Rubus carpinifolius* seems the most uncommon species.

In the woods oak (*Quercus Robus*) predominates above every other tree, and on the ridge-way in Eastnor Park is one about 150 years old, which is adorned with a fine coronal of mistletoe. *Q. sessiliflora* also presents itself, but assuredly much less in quantity than the former, though it boasts a white-leaved variety not mentioned by botanists, so far as Mr. Lees was aware of. A hamlet occupying the valley between the Ragged Stone and Keysand Hills (the two most southerley ones of the chain), bears the appellation of "*The White-leaved Oak,*" but after several visits to the place Mr. L. could never find any remarkable oak there, and was indeed assured by a man who had known the vicinity many years, that there had formerly been an oak there with light or whitish foliage, but that it had been cut down. Here the matter rested till 1841, when wandering about the syenitic protuberances at the extreme northern termination of the hills, Mr. L. fortunately came upon an oak whose leaves were variegated with white, growing on one of these rocky knolls, and it proved to be *Quercus sessiliflora,* doubtless similar in the character of its foliage to the old "*White-leaved Oak*" that has bequeathed its name to the hamlet before mentioned.

The prevalence of West, South-west and Southern winds at Malvern, especially during the winter and spring months, gives an almost perpetual moisture to the grassy turf favourable to Cryptogamic growth ; but the violence of the winds has the effect of keeping the Phænogamic vegetation in a very dwarf state, especially near the summits of the hills. This is observable particularly in *Carlina vulgaris,* which is often very luxuriant at the base of the hills and only a few inches in height on the summit of the Herefordshire Beacon.— Other plants seem influenced in the same way, as *Myosotis collina,* which on the ridge scarcely peers above the soil and is excessively hirsute. The following are the rarer plants not alluded to in Mr. Lees' former paper.

Veronica montana
Myosotis collina
  versicolor
Cynoglossum sylvaticum
Hyoscyamus niger
Campanula patula
  latifolia
  Trachelium
Viola hirta
Linum usitatissimum
Galanthus nivalis
Narcissus Pseudo-narcissus
  biflorus
Tulipa sylvestris
Colchicum autumnale
Vaccinium Myrtillus
Polygonum Bistorta
Pyrola minor
Chrysosplenium alternifolium
Sedum Telephium
  album
Spiræa Filipendula
Potentilla argentea
  verna
Tilia grandifolia
  parvifolia
Aquilegia vulgaris
Helleborus viridis
Mentha Pulegium
Nepeta Cataria
Lathræa squamaria
Antirrhinum Orontium
Orobanche major
Lepidium Smithii
Cardamine impatiens
  amara
Erodium cicutarium
  maritimum
Geranium lucidum
Genista anglica
Lathyrus Nissolia
Vicia Bithynica
Hypericum calycinum
  Androsænum
  dubium
Tragopogon pratensis
  minor
Gnaphalium sylvaticum
Conyza squarrosa
Pulicaria vulgaris
Listera Nidus-avis, and
Orchideæ before named

Many of the specimens were exhibited, and Mr. Lees proposed to advert to the Cryptogamic vegetation of the hills (sending specimens to the Society) in a future paper.—*G. E. D.*

LUXFORD & CO., PRINTERS, RATCLIFF HIGHWAY.